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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,612	08/22/2003	Tsuguo Watanabe	0505-1233P	8275

2292 7590 11/29/2004

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EXAMINER

HO, HA DINH

ART UNIT PAPER NUMBER

3681

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/645,612	Applicant(s) WATANABE ET AL.	
	Examiner Ha D. Ho	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003 and 19 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-21 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the first Office Action on the merits of Application No. 10/645,612 filed on 8/22/03. Claims 1-21 are currently pending.

Election/Restrictions

2. Applicant's election with traverse of group 1, claims 1-15, in the reply filed on 10/19/04 is acknowledged. The traversal found persuasive. The requirement is therefore withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2, 3, 5, 6, 8, 9, 12, 13 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 2 and 17, line 3, the recitation "a gear position" constitutes a double inclusion since "a gear position" was previously recited. It is suggested to change "a" to --the--
- Claim 19 recites the limitation "said correction means" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 7, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hosaka (US 4,976,239).

Hosaka teaches a fuel injection control system/method for an internal combustion engine 3, the engine for transmitting a driving force to an output shaft 5 through a transmission 4, comprising: means for detecting engine speed (see col. 7, line 2); means for determining a fuel injection quantity as a function of said engine speed (see col. 12, lines 31-34); means 36 for discriminating a gear position of said transmission; and means for correcting said fuel injection quantity on the basis of the discrimination result of said gear position (see col. 12, lines 45-49), means (31) for detecting a throttle opening; and a TH map (note that the control unit 1000 comprises a microcomputer and controls a fuel injection system, see col. 11, lines 14-16, and that microcomputer includes the stored data which is interpreted as a TH map) in which said fuel injection quantity has been registered with the engine speed and the throttle opening as parameters, wherein said fuel injection quantity is determined on the basis of said TH map.

7. Claims 1-6, 11-14, 16-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwamoto (US 5,230,318).

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Iwamoto teaches a fuel injection control system/method for an internal combustion engine 1, the engine for transmitting a driving force to an output shaft through a transmission (inherently), comprising: means for detecting engine speed (see col. 3, lines 40-42); means for determining a fuel injection quantity ($\tau_i \times C_i$) as a function of said engine speed (Fig. 3, steps 230 and 250); means for discriminating a gear position of said transmission (see col. 3, lines 22-27); and means for correcting said fuel injection quantity on the basis of the discrimination result of said gear position (Fig. 3, steps 230, 240 and 260);

means for determining a correction factor FPWR as a function of the gear position, and means for multiplying said fuel injection quantity by said correction factor (see Fig. 3, step 240);

wherein means for determining said correction factor determines said correction factor as a function of the gear position and the engine speed (the factor FPWR is determined under the decision that the engine is the high-load region, see col. 5, lines 4-6, and that decision is made based on the gear position and the engine speed, see Fig. 2),

wherein the lower the gear position becomes, the more said correction means reduces the fuel injection quantity (see Fig. 5, col. 4, lines 28-44, and col. 5, lines 24-41),

wherein said means for discriminating the gear position discriminates the gear position on the basis of said engine speed and a vehicle speed (see col. 3, line 45-48).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 11, 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosaka (US 4,976,239) in view of Iwamoto (US 5,230,318).

Hosaka teaches means (sensor 36) for discriminating the gear position of the transmission, means for detecting engine speed (see col. 7, line 2), and means for detecting vehicle speed (see col. 21, lines 6-7). Hosaka does not show means for discriminating the gear position discriminates the gear position on the basis of the engine speed and the vehicle speed.

Iwamoto shows means for discriminating the gear position discriminates the gear position on the basis of the engine speed and the vehicle speed (see col. 3, line 45-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Hosaka to have means for discriminating the gear position discriminates the gear position on the basis of the engine speed and the vehicle speed in view of Iwamoto in order to eliminate the gear position sensor to reduce part.

Allowable Subject Matter

10. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 8 and 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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Cited Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Itoyama et al.'529, Toukura et al.'289, Nakane'534, Oshiage et al.'799, and Amano'063 which each shows an engine control system including fuel injection quantity control based on engine speed and vehicle speed.

Communication

13. Submission of your response by facsimile transmission is encouraged. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see M.P.E.P. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P. 512). The following is an example of the format the certification might take:

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Typed or printed name of person signing this certificate:

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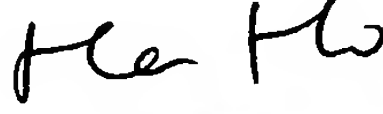
If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the

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processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Examiner Ho whose telephone number is (703) 305-0738. The examiner can normally be reached on Monday-Friday from 7:30 A.M. to 5:00 P.M. Eastern Standard Time. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Mr. Charles Marmor, can be reached at (703) 308-0830. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

HDH
(703) 305-0738
November 24, 2004


HAHO
PRIMARY EXAMINER
Art Unit 3681 11/24/04